

Unit 9 Review

Answer Key

Write the following equations in Slope-Intercept Form.

<p>1) The line with $m = -\frac{2}{7}$, through the point (0,3)</p> $3 = (-\frac{2}{7})(0) + b$ $3 = b$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$y = -\frac{2}{7}x + 3$</div>	<p>2) The line through the points (1,-5) and (2,-3) $m = \frac{-3 - (-5)}{2 - 1} = \frac{2}{1} = 2$</p> $-3 = (2)(2) + b$ $-3 = 4 + b$ $-7 = b$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$y = 2x - 7$</div>
<p>3) The line parallel to $y = -5x + 6$ through (-2,8) $m = -5$</p> $8 = (-5)(-2) + b$ $8 = 10 + b$ $-10 - 10$ $-2 = b$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$y = -5x - 2$</div>	<p>4) The line perpendicular to $4x - y = -2$ through (0,2) $-y = -4x - 2$ $y = 4x + 2$ $m = -\frac{1}{4}$</p> $2 = b$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$y = -\frac{1}{4}x + 2$</div>

Write the following equations in Standard Form.

<p>5) The line through (5,4) and (-5,-2)</p> $m = \frac{-2 - 4}{-5 - 5} = \frac{-6}{-10} = \frac{3}{5}$ $4 = (\frac{3}{5})(5) + b$ $-3 - 3$ $1 = b$ $y = \frac{3}{5}x + 1$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$3x - 5y = -5$</div>	<p>6) The line parallel to $-2x + y = -7$ through (6,1)</p> $y = 2x - 7$ $m = 2$ $1 = (2)(6) + b$ $-12 - 12$ $-11 = b$ $y = 2x - 11$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$-2x + y = -11$</div>
<p>7) The line with $m = -\frac{2}{5}$, through the point (-5,4)</p> $4 = (-\frac{2}{5})(-5) + b$ $y = -\frac{2}{5}x + 2$ $-2 - 2$ $2 = b$ $5(\frac{2}{5}x + y = 2)$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$2x + 5y = 10$</div>	<p>8) The line through (6,-5) and (12,-5)</p> $m = \frac{-5 - (-5)}{12 - 6} = 0$ $-5 = b$ <div style="border: 1px solid black; padding: 2px; display: inline-block;">$y = -5$</div>

- 9) A line passes through (4,-6) with $m = -\frac{3}{4}$. Which point does the line also pass through?
- ~~A) (0,3)~~ ~~B) (8,3)~~ **C) (8,-9)** D) (4,6)
- $3 = -3x$
 $-6 = (-\frac{3}{4})(4) + b$
 $+3 + 3$
 $-3 = b$
 $y = -\frac{3}{4}x - 3$